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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,827	01/04/2002	Upendra V. Chaudhari	YOR920010539US1(590.076)	7326
35195 7590 04/21/2008 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143				
EXAMINER				
HAN, QI				
ART UNIT		PAPER NUMBER		
2626				
MAIL DATE		DELIVERY MODE		
04/21/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

**Application No.**

10/042,827

**Applicant(s)**

CHAUDHARI ET AL.

**Examiner**

QI HAN

**Art Unit**

2626

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 26 March 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Richmond Dorvil/  
Supervisory Patent Examiner, Art Unit 2626

Continuation of 11, does NOT place the application in condition for allowance because: the applicant's arguments in the amendment filed on 03/26/2008, regarding claim rejection under 35 USC 102/103 in the final office action, are not persuasive.

a. Even though the examiner withdraws the 35 USC 112 rejection based on the amendment (i.e. deleting the previous amended word "untrained"), the claimed limitation of "speech and audio data as input data" cannot be only interpreted as "raw data" for the prior art rejection because there is no such limitation in the claims and no such disclosure in the specification.

b. In response to applicant's arguments regarding claims 1-3 and 11-13 that "raw input data could be clustered independent of any particular model or system", the teachings of Gao (as well as other references) are completely inapplicable to the instantly claimed invention in as much as they do not each methods of clustering data" (Remarks: page 11, paragraph 2), "one of ordinary skill in the art would not recognize clustering as a type of modeling", "one of ordinary skill in the art would understand that the clustering technique of the instantly claimed invention is not "modeling" in the sense that the Examiner is reading it; that is, the raw input data is being worked on in the instantly claimed invention to cluster (group) it, whereas "modeling" is done once the data has been clustered" (Remarks: page 12), "Gao thus does not teach in any way at all a system that clusters the input data independent of models", "Gao does not teach nor is it concerned in any way with the instantly claimed invention's method of clustering raw input data", and "speaker independent" does not mean "independent of any model" (Remarks: page 13, paragraph 1 to page 14, paragraph 2), the examiner respectfully disagrees with the applicant's arguments and has a different view of the prior art teachings and the claim interpretations.

Firstly, by reviewing the original specification and amended claims, it is noted that the argued term "raw input data" is not in the claims, so that the related arguments are irrelevant to the rejection. It is also noted that the term is not disclosed in the specification, so that even if the term is emended in the claim(s), it would be new subject matter. It is reminded that the proper way for adding a new matter (such as "raw input data") is to file CIP.

Secondly, it is noted that the argued limitation of "said clustering being independent of any model wherein the splitting of the input data ...occurs independent of model" is unclear or vague because the applicant does not clearly define or describe what the model he means in the specification. Further, the specification discloses that the clustering (or splitting) uses "probability density of f" with the related thresholds (specification: page 6), which clearly suggests using some statistical model(s) for clustering because one of ordinary skill in the art would readily recognize that processing (such clustering) data using probability density function(s) (or variable) is based on certain statistical model.

Thirdly, it is noted that Gao discloses 'training cluster systems for partitioning acoustic space', using 'speaker-independent model class-specific pre-clustering training speakers', 'to create a speaker-independent, context-independent system or model', including 'top-down clustering (by splitting) to group or cluster these speaker-independent, context-independent (interpreted as clustering being independent of any model) acoustics (speech and audio data) into classes having similar features' (Gao: col. 8, lines 60- col. 9, line 9), which is properly read on the claim(s), based on broadest reasonable interpretation(s) in light of the specification.

c. In response to applicant's arguments that the claimed limitation of "wherein there is no variability in the clustering due to randomness" must be read in combination with the preceding claim language "said clustering being independent of any model" in order to ... (Remarks: pages 14-15, bridge paragraph), it is noted that even though the rejection provide certain prior art disclosure against the limitation, there is no much patentable weight given for this limitation, because:

- (i). the specification lacks specific description for physically or functionally connecting among the terms "no variability" and "randomness" and "clustering", nor in the arguments;
- (ii). the limitation "there is no variability in the clustering due to randomness" can be interpreted as at least two different meanings: "due to randomness, there is no variability in the clustering" and "in the clustering, there is no randomness-caused variability"; and/or
- (iii). "wherein..." only provides optional feature, not be necessary element.

d. In response to applicant's arguments regarding claim rejection under 35 103 that "In Kuhn, the eigenvector/eigenvalue decomposition, a standard mathematical technique, is used for determining a feature space in which to represent speaker models, i.e. not to cluster input data" and "this (Kuhn's disclosure) has nothing to do with performing eigenvector/eigenvalue decomposition to cluster the input data, as in the instantly claimed invention" (Remarks: page 16), the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Kuhn teach "speaker clustering" (i.e. deal with clustering input data—speaker's speech or utterance), using HMM model with other 'model adaptation techniques' including processing eigenvector (col. 1, col. 39-65, col. 2, lines5-25, col. 6, lines 11-34, and col. 7, lines 8-9). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Gao's model with Kuhn's eigenvector decomposition via data clustering, for the purpose of improving performance for a speech (or speaker) recognition system (Kuhn col. 1, lines 39-40).

For above reasons, the prior art rejection is sustained.